DOCUMENT RESUME

ED 386 648 CG 026 468

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TITLE Effects of Family Structure on High School Students' Academic Achievement and Behavior.
PUB DATE Aug 95
NOTE 43p.; Research Study, Sam Houston State University.
PUB TYPE Reports - Research/Technical (143) -- Dissertations/Theses - Undetermined (040) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Family School Relationship; *Family Structure; High Schools; *High School Students; Nuclear Family; One Parent Family; *Student Behavior

ABSTRACT

As students lose traditional family structure, some studies indicate that their academic behavior may be affected. The purpose of this study is to measure the difference in achievement of high school students from single-parent homes compared to those from intact homes. The study is limited to Snook Independent School District (Texas), specifically, Snook High School in the 1994-1995 school year. Data were collected on 52 junior and senior students. Grades for English and math were recorded as were behavior referrals. Data collected identifies two groups: those from single parent families (N=20), and those from households with two parents (N=32). T tests were run to discover the significance of difference in grade between the two student groups. Discipline referrals were tabulated and the means compared. There were significant differences in discipline and in English, but no significant differences in math means. (JBJ)

EFFECTS OF FAMILY STRUCTURE ON HIGH SCHOOL STUDENTS' ACADEMIC ACHIEVEMENT AND BEHAVIOR

by

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A research study

submitted in partial fulfillment

of requirements for the course CNE 579

Sam Houston State University

August, 1995

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CHAPTER I

INTRODUCTION

General Introduction

Some experts in the field of education have been concerned about the children of divorce since the rapid increase in the number of failed marriages began in the late 1960's. This started a great change in the structure of American society, and just as J. Weed predicted in the 1970's (as cited in Featherstone, Cundick, and Jensen, 1992, p.1.) one half of all new marriages end in divorce. Between 1970 and 1990 the divorce rate tripled, and 50 percent of all children live at least part of their lives in single-parent homes (Gelbrich and Hare, 1989, p.115.) According to Finn and Owings, (1994, p.176) this resulting increase in single-parent and step-parent families has created a great deal of concern. As students lose the basic traditional family structure, some studies indicate that their academic behavior may be affected. Other changes, especially economic status, are easily determined, but the impact on school performance is not as apparent. Some researchers believe that the absence of one parent in the home is cause for concern, as it has a major impact on the academic and social success of a child (Milne, Myers, Rosenthal, and Ginsburg, 1986, p.125.)

Statement of the Problem

As families become more non-traditional, students are exhibiting more failure to achieve academically and socially in school.

Purpose of the Study

The purpose of this study is to measure the difference in achievement of high school students from single-parent homes compared to those from intact homes.

Importance of the Study

If variance occurs, this study may help educators to realize a possible need for change in views and techniques in school management.

Definition of terms

1. Blended family. A blended family is formed when two partners each have children to bring to the marriage and all use the same last name.

2. Intact family. An intact family is the traditional family in which children live with both biological or adoptive parents.

3. Reconstituted family. A reconstituted family is one in which the child has a last name different from that of the male guardian.

Null Hypothesis

No significant difference in school performance exists between students from non-traditional families compared to students from two-parent families.

Limitations and Delimitations

The study is limited to Snook Independent School District (SISD). It is delimited to Snook High School in the 1994-1995 school year. It is also delimited to students in regular English and math classes.

Assumptions

1. Students are representative of future students of SISD.

2. Teacher behavior and referrals are consistent with all students.

CHAPTER II

REVIEW OF THE LITERATURE

Effects of Family Structure on Success in School

Studies suggest that schools and parents can expect to see more inappropriate behavior in children who experience divorce than in children from intact families. Dr. Frank Brown (as cited in Allers, 1982, p.67) evaluated 18,244 children in grades 1-12 from 14 states and found that children from non-traditional homes had numerous behavior problems, did considerably worse academically, and were more often juvenile offenders than their peers from two-parent families. Ratios indicated nine to five dropouts and eight to one expulsion cases (Allers, 1982, p.67). A direct relationship between a child's home life and school performance is evident, and the divorce experience may consume a child's world (Allers, 1982, p.147).

Pringle's 1970 findings (as cited in Gelbrich and Hare, 1989) established the belief that familial factors play an important role in helping to identify those students who are gifted underachievers (Gelbrich, et al., p.115). The research indicated a negative relationship between school achievement and single-parenthood. The gifted student from a single-parent home is more likely to be ranked lower than his peers (Gelbrich, et al., p.116).

Research by Featherstone, Cundick, and Jensen further supports the theory that divorce has an adverse effect on

the child. The researchers ranked students according to performance, grades, and citizenship. Consistently, students from intact families ranked at the top, those from reconstituted families ranked second, and those from single-parent homes ranked lowest. Having two constant caregivers of an intact family appears to be highly advantageous, as these students had fewer tardies and absences and higher grade point averages. R. Kelly Raley's research delves further, stating that 12 percent fewer students from single-parent families graduate than those from intact families (p.12).

Optimistically, some research indicates there is little conclusive evidence to suggest that poor performance in school is the direct result of being from a non-traditional family, according to Blechman, 1982 and Bernard and Nesbitt, 1981 (as cited by Featherstone, et al., 1992).

Negative Effects of Stress on a Child's Performance

The stress children suffer due to divorce affects the young student in a variety of ways, and eventually that stress will manifest itself in the student's performance level. The negative experiences that surround separation and divorce may totally consume that child's world, making the child unable to concentrate, resulting in eventual academic failure (Milne, et al., p.125). The child may feel both abandoned by the absent parent and gulity for his leaving.

Monk and Van Boxtel (as cited in Gelbrich, and Hare, 1989) reinforced the notion that stress is significantly detrimental, stating that children who have to spend a great deal of time

and energy dealing with disruptions in the home have little energy left to expend on school achievement. Other divorce-related stress that causes failure in school is from the child's loss of parental time. parents who are dealing with their own turmoil have less time and energy to spend on their children. Reginald Clark (as cited by McLanahan and Sandefur, 1994) argues that parental involvement and support is much more important than the number of parents in the home. Often a single parent who is alone responsible for the welfare of the entire family is less apt to provide a supportive environment necessary for academic success (Lanahan, et al., 1994, p.34).

Effects of Economics on Students' Success

Income loss is cited in most situations to be a contributing factor of a child's failure in school. Divorce and the loss of one income most often means moving to a less affluent neighborhood with poorer quality schools. Single parents find it difficult to afford such things as private lessons, camp, trips, and other intellectual stimulation outside of school. This in turn reduces expectation from parents and motivation in students. Students who are not expected to go to college tend to do more poorly in high school (McLanahan, et al., 1994, p.34).

Allers indicated that some students don't indulge in extracurricular activities because they know their parent is struggling financially. When the father is absent, which is most often the case, the mother is often absent, too, due to

employment obligations. This often leaves the child unsupervised, leading to behavior problems, according to Astone and McLanahan (as cited in Finn and Owings, 1994, p.186). In addition to failure and behavior problems, one of the most serious effects of low income occurs when a child quits school to support himself or the family.

Ongoing Concerns

Of the eight studies reviewed, it is obvious that each held legitimate concerns. The information indicates that family situations affect the performance of the child. It is also important to note that the level of involvement of at least one parent is linked to a child's success rate. It is crucial for a parent, whether single or married, to be actively involved in the child's life.

CHAPTER III

Methods and Procedures

To determine the effects of family structure on the achievements of a student, data were collected on 52 junior and senior students. The grades for English and math for the 1994 and 1995 school years were recorded. Behavior referrals for 1995 were also considered. The information was collected anonymously with the help of the Snook High School Principal, Mr. Melvin Schoeneman, and his secretary, Mrs. Joy Horn.

The data collected identified two groups - those from single-parent families (either father or mother) and those from households with two adults. The latter group, which involved a total of 32 students, included five homes of reconstituted families or grandparent guardians. There were 20 students from single-parent homes.

Though the questionnaire (see Appendix A) could be issued to obtain similar pertinent information in a longer time frame, the permanent records of the students provided the necessary information for the study. The recorded data were entered into a Macintosh computer using the Statworks program (see Appendix B). The minimum level of probability to reject the null hypothesis was set at $p<.05$ level of significance.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

The study of 52 observations recorded English and math grades. Of students in the study, 20 were from single-parent homes and 32 were from two-parent homes. The t tests were run comparing the mean scores in English and math for the 1994 and 1995 school years.

The mean score comparison in English shows a statistically significant degree of difference for both years. Table 1 concerns the 1994 English scores, and the results were a t-value of -3.42, standard deviation 9.82, and a significance of 0.001. Table 2 indicates similar results for the 1995 school year. The t-value was -2.60, standard deviation 10.83, and a significance of 0.012.

The results shown on these two tables indicate that there is a statistically significant difference in the English scores of students from single-parent homes and those of students from two-parent homes.

Table 1.- Mean comparison of 1994 English Scores

Data File: ACHIEVEMENT-FAMILY STATUS

Independent Samples...

Variable:	S-ENG-94	M-ENG-94
Mean:	73.05	80.75
Std. Deviation:	9.82	6.45
Observations:	20	32

t-statistic:	-3.42	Hypothesis:
Degrees of Freedom:	50	Ho: $\mu 1 = \mu 2$
Significance:	0.001	Ha: $\mu 1 \neq \mu 2$

Table 2. - Mean Comparison of 1995 English Scores

Data File: ACHIEVEMENT-FAMILY STATUS

Independent Samples...

Variable:	S-ENG-95	M-ENG-95
Mean:	76.00	82.53
Std. Deviation:	10.83	7.34
Observations:	20	32

t-statistic:	-2.60	Hypothesis:
Degrees of Freedom:	50	Ho: $\mu 1 = \mu 2$
Significance:	0.012	Ha: $\mu 1 \neq \mu 2$

Comparison of the math scores indicated that there is no statistically significant difference in the math means. Tables 3 and 4 show the results of each year. The mean of the 1994 comparison indicate a t-value of -1.80, a standard deviation of 9.66, and a significance of 0.078. The results of the 1995 scores were a t-value of -1.26, standard deviation 11.75, and significance 0.214. Neither of these were statistically significant to the $p<.05$ value.

Figure 1 shows the mean scores of the two groups, students from single-parent homes and students from two-parent homes. The first and third columns are representative of 1994 scores, and the second and fourth columns are of 1995 scores. The two subject areas of math and English are represented, as the code explains.

Table 3. - Mean Comparison of 1994 Math Scores

Data File: ACHIEVEMENT-FAMILY STATUS

Independent Samples...

Variable:	S-MATH-94	M-MATH-94
Mean:	76.65	81.03
Std. Deviation:	9.66	7.76
Observations:	20	32

t-statistic:	-1.80	Hypothesis:
Degrees of Freedom:	50	Ho: $\mu 1 = \mu 2$
Significance:	0.078	Ha: $\mu 1 \neq \mu 2$

Table 4. - Mean Comparison of 1995 Math Scores

Data File: ACHIEVEMENT-FAMILY STATUS

Independent Samples...

Variable:	S-MATH-95	M-MATH-95
Mean:	76.70	80.28
Std. Deviation:	11.75	8.72
Observations:	20	32

t-statistic:	-1.26	Hypothesis:
Degrees of Freedom:	50	Ho: $\mu 1 = \mu 2$
Significance:	0.214	Ha: $\mu 1 \neq \mu 2$

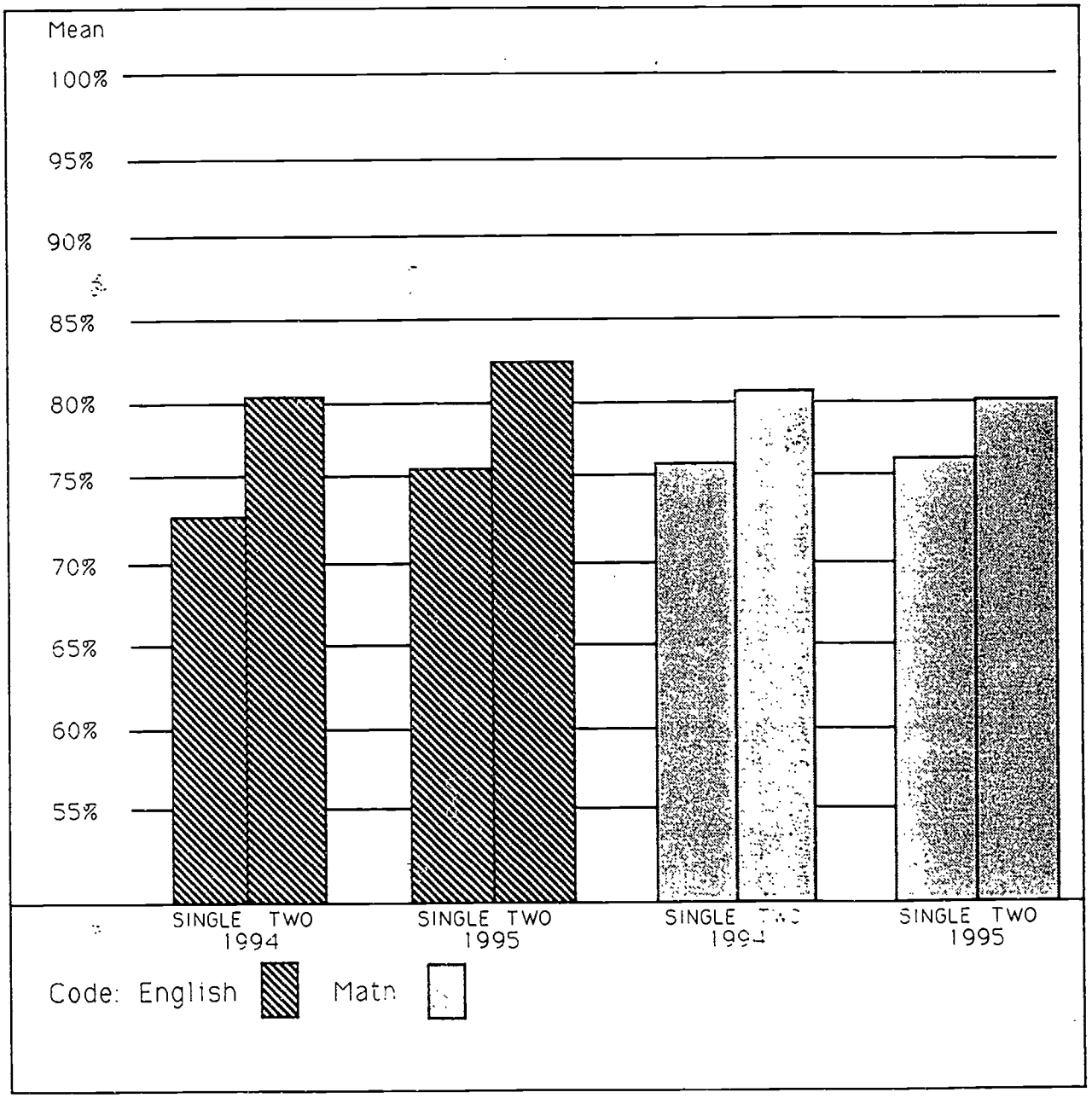

Figure 1 Comparison of Mean Scores of Students from Single-Parent Homes to Students from Two-Parent Homes

Data were also recorded noting the number of times each student was referred to the office for discipline. A statistically significant difference in the two groups was noted, indicating that the attitude of students from single-parent homes may affect their academic achievements, especially in subjects requiring reading comprehension and verbal skills. Table 5 shows the results of the t test indicating that the mean of students from single-parent homes was 5.80 times compared to that of students from two-parent homes, which was 1.56. The t-value was 2.62 and probability was .012 (well below the $p<.05$ value). Therefore, it is evident that the difference in discipline between the two categories of students is statistically significant. This table is included as a consideration of interest to the reader. (See also figure in Appendix C)

Preponderance of difference indicates that there is variation in the academic achievement of students from different family structures. Students from two-parent homes do better and achieve higher grades than those from single-parent homes. Even though the differences were not all found to be statistically significant, the differences did appear in each comparison to some degree, favoring the achievement of students from two-parent homes.

Table 5. - Comparison of Discipline Referrals, 1995

Data File: ACHIEVEMENT-FAMILY STATUS

Independent Samples...

Variable:	S-DISCIPLINE	M-DISCIPLINE
Mean:	5.80	1.56
Std. Deviation:	7.04	4.66
Observations:	20	32

t-statistic:	2.62	Hypothesis:
Degrees of Freedom:	50	Ho: $\mu 1 = \mu 2$
Significance:	0.012	Ha: $\mu 1 \neq \mu 2$

CHAPTER V

SUMMARY

Data were collected and recorded on 52 high school students, and t tests were run to discover the significance of difference in grades between students from single-parent families and students from two-parent families. The t tests were run on the Statworks program on a Macintosh computer. English grades for each group from 1994 and from 1995 were compared, as were math grades for the same two years.

Discipline referrals were tabulated and the means compared. There were significant differences in discipline and in English, but the differences in math means were not significant.

Indications are that courses involving language skills may be more difficult than those involving numbers, as students use math daily to live (ie. in making change) and there is less concern by youth for accuracy in language. This is a possibility. Also, the attitude of students makes a difference in achievement, and seems to be related to family structure.

CONCLUSION

The null hypothesis was there is no significant difference in the achievement level of students from single-parent homes compared to students from two-parent homes.

Based on the t tests, the null hypothesis was rejected in

the area of English. There was a statistically significant measure of difference in discipline, also rejecting the null hypothesis. A preponderance of difference also indicates rejection in the area of math.

RECOMMENDATIONS

Further investigation would be beneficial, possibly including all areas of education to determine whether or not subjects based on reading comprehension and verbal skills are more difficult for students with less attention at home. Higher level thinking skills should be investigated, and an in-depth look at the courses that work mainly with numbers could be studied to determine the accuracy of comparison.

Over a longer period of time, questionnaire information could be added to the data collected, and more tests could be run. More detailed categories would be a benefit. The categories could be single-parent homes, step-parent homes, grandparent homes, and intact families. This would insure a more concise comparison.

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APPENDIX A

Cover Letter and Questionnaire

SNOOK INDEPENDENT SCHOOL DISTRICT
Box 87
Snook, Texas 77878

July 24, 1995

Dear Parent:

Enclosed is a questionnaire being issued to parents of high school students enrolled in Snook I.S.D. in an effort to determine the needs of the changing student population. Please answer and return one form for each student who resides in your household. The form should be sent to the school district in the envelope provided by August 1, 1995.

This is an anonymous study; please do not sign your name on any part of the form. All information will be kept strictly confidential and grouped. Results may be obtained by contacting the school district office after September 1, 1995.

Thank you very much for your time in helping with this research as we strive to assist your child in his/her education.

Sincerely,

Vikki Sears
CNE 579 Student

QUESTIONNAIRE

Directions: Please mark the letter that corresponds with the correct answer for each question below. Mark only one answer for each question.

1. How many adults live in your home?

   A. 1 B. 2 C. 3 or more

2. What is your relationship to this child?

   A. parent (biological or adoptive) B. Grandparent C. non relative D. other

3. How old is this child?

   A. 14 B. 15 C. 16 D. 17

4. How is your child classified?

   A. Freshman B. Sophomore C. Junior D. Senior

Directions: Mark the following as above; if the answer is not listed, mark E.

5. My childs academic grades are usually

   A. A/B B. B/C C. C/D D. D/F

6. Regarding my child's performance in English class, he/she

   A. never failed B. failed once C. failed twice D. fails often

7. During high school my child's grades have

   A. improved B. not changed C. declined

8. I help my child with homework

   A. never B. seldom C. often

9. My child is most often involved in

   A. sports B. drama C. music D. UIL academics

10. I attend or help my child with

    A. sports B. drama C. music D. UIL academics

11. I have received notices from the school regarding the behavior of my child

    A. never B. seldom C. often

12. I have received notices from the school regarding my child's grades in English or math

    A. never B. seldom C. often

13. The most severe discipline my child has received at school is

    A. D-hall B. ISS C. suspension D. other

APPENDIX B

Table of Raw Data

Table B1. - Raw Data

ACHIEVEMENT-FAMILY STATUS

	S-ENG-94	S-ENG-95	S-MATH-94	S-MATH-95	S-DISCIPLINE	M-ENG-94	M-ENG-95		M-MATH-94	M-MATH-95	M-DISCIPLINE
1	69	83	68	80	0	87	85	1	76	72	0
2	61	73	69	76	0	83	81	2	86	82	0
3	75	78	76	71	5	86	89	3	89	83	0
4	62	50	75	50	0	81	86	4	83	72	1
5	73	71	75	72	8	75	86	5	76	87	0
6	74	78	79	75	8	72	77	6	78	85	0
7	81	84	82	75	0	73	71	7	78	75	2
8	79	84	80	74	15	75	65	8	70	70	20
9	50	70	70	67	12	93	94	9	88	91	0
10	64	70	86	89	9	89	96	10	96	100	0
11	61	73	56	78	24	90	92	11	96	93	0
12	78	94	83	95	0	77	82	12	75	73	0
13	74	56	80	83	4	93	93	13	84	85	0
14	73	84	75	71	0	83	83	14	82	81	0
15	82	76	88	66	3	77	84	15	68	74	0
16	75	64	55	57	11	86	89	16	90	83	0
17	77	80	81	87	0	90	93	17	86	90	0
18	81	77	79	86	0	73	80	18	81	80	3
19	77	83	81	85	17	79	87	19	74	68	1
20	95	92	95	97	0	78	75	20	74	80	3
21						77	78	21	85	90	0
22						79	89	22	92	91	0
23						86	78	23	84	78	0
24						80	81	24	82	83	0
25						86	86	25	69	63	0
26						76	77	26	73	70	0
27						85	83	27	93	94	0
28						81	74	28	71	73	0
29						75	79	29	73	75	2
30						73	76	30	80	72	0
31						70	72	31	79	77	18
32						76	80	32	82	79	0

APPENDIX C

Additional Tables and Figure

Table C1.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: S-ENG-94	Observations: 20
Minimum: 50.00	Maximum: 95.00
Range: 45.00	Median: 74.50
Mean: 73.05	Standard Error: 2.20
Variance:	96.37
Standard Deviation:	9.82
Coefficient of Variation:	13.44
Skewness: -0.27	Kurtosis: 0.20

Table C2.

Data File: ACHIEVEMENT-FAMILY STATUS	
Variable: M-ENG-94	Observations: 32
Minimum: 70.00	Maximum: 93.00
Range: 23.00	Median: 79.50
Mean: 80.75	Standard Error: 1.14
Variance:	41.61
Standard Deviation:	6.45
Coefficient of Variation:	7.99
Skewness: 0.29	Kurtosis: -1.12

Table C3.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: S-ENG-95	Observations: 20
Minimum: 50.00	Maximum: 94.00
Range: 44.00	Median: 77.50
Mean: 76.00	Standard Error: 2.42
Variance:	117.37
Standard Deviation:	10.83
Coefficient of Variation:	14.25
Skewness: -0.62	Kurtosis: 0.01

Table C4.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: M-ENG-95	Observations: 32
Minimum: 65.00	Maximum: 96.00
Range: 31.00	Median: 82.50
Mean: 82.53	Standard Error: 1.30
Variance:	53.81
Standard Deviation:	7.34
Coefficient of Variation:	8.89
Skewness: -0.15	Kurtosis: -0.56

Table C5.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: S-MATH-94	Observations: 20
Minimum: 55.00	Maximum: 95.00
Range: 40.00	Median: 79.00
Mean: 76.65	Standard Error: 2.16
Variance:	93.40
Standard Deviation:	9.66
Coefficient of Variation:	12.61
Skewness: -0.62	Kurtosis: 0.17

Table C6.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: M-MATH-94	Observations: 32
Minimum: 68.00	Maximum: 96.00
Range: 28.00	Median: 81.50
Mean: 81.03	Standard Error: 1.37
Variance:	60.29
Standard Deviation:	7.76
Coefficient of Variation:	9.58
Skewness: 0.21	Kurtosis: -0.93

Table C7.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: S-MATH-95 Observations: 20

Minimum: 50.00	Maximum: 97.00
Range: 47.00	Median: 75.50
Mean: 76.70	Standard Error: 2.63
Variance:	138.01
Standard Deviation:	11.75
Coefficient of Variation:	15.32
Skewness: -0.31	Kurtosis: -0.34

Table C8.

Data File: ACHIEVEMENT-FAMILY STATUS

Variable: M-MATH-95	Observations: 32
Minimum: 63.00	Maximum: 100.00
Range: 37.00	Median: 80.00
Mean: 80.28	Standard Error: 1.54
Variance:	76.08
Standard Deviation:	8.72
Coefficient of Variation:	10.86
Skewness: 0.23	Kurtosis: -0.75

Table C9.

Data File: ACHIEVEMENT-FAMILY STATUS
Variable: S-DISCIPLINE Observations: 20

Minimum: 0.00	Maximum: 24.00
Range: 24.00	Median: 3.50
Mean: 5.80	Standard Error: 1.57
Variance:	49.54
Standard Deviation:	7.04
Coefficient of Variation:	121.35
Skewness: 0.98	Kurtosis: -0.04

Table C10.

Data File: ACHIEVEMENT-FAMILY STATUS
Variable: M-DISCIPLINE Observations: 32

Minimum: 0.00	Maximum: 20.00
Range: 20.00	Median: 0.00
Mean: 1.56	Standard Error: 0.82
Variance:	21.74
Standard Deviation:	4.66
Coefficient of Variation:	298.39
Skewness: 3.28	Kurtosis: 9.48

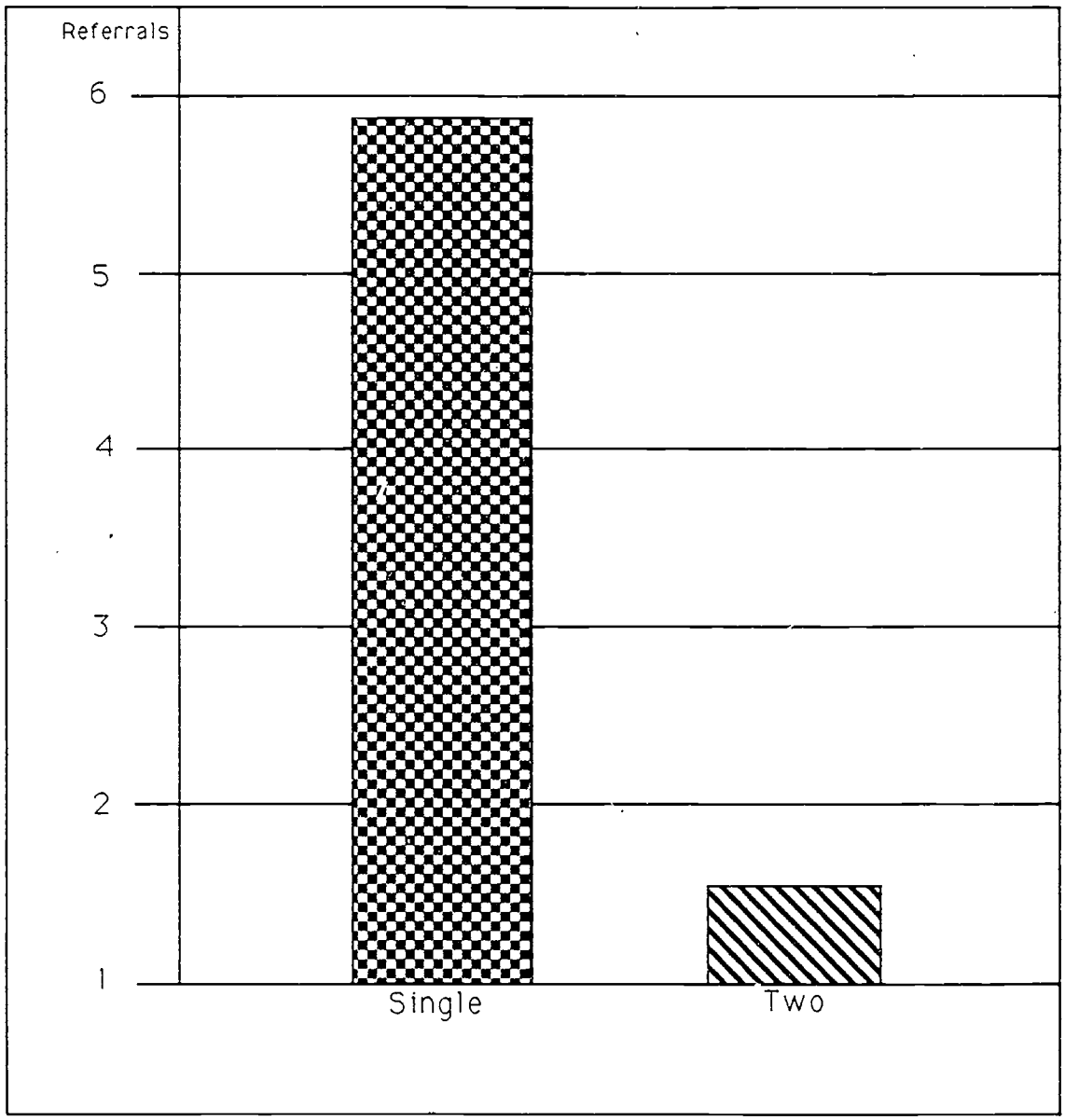

Figure C1 Comparison of Discipline Referrals for Students from Single-Parent Homes to Students from Two-Parent Homes